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ABSTRACT

This document describes the objectives and focus of a workshop convened by UNESCO in 1982 to design and develop frameworks for training national curriculum specialists, and presents three "workshop products," i.e., reports on policy resulting from the workshop. Part one outlines purpose of the workshop and lists the participants from eight countries: Afghanistan, Bangladesh, China, India, Pakistan, the Philippines, Viet Nam, and Thailand. The major objective addressed by participants was to enhance curriculum developers' ability to support improved learning by children from disadvantaged environments. A UNESCO official's welcoming address, which focused on education for the disadvantaged in developing countries, is also included in this section. Part two contains the three policy papers. These are entitled (1) "Identification of Problems Hindering Achievement by Disadvantaged Learners and Actions to Improve Learning"; (2) "Exemplar Training Framework in Respect of Intervention in the Specification of Intended Learning Outcomes"; and (3) "Exemplar Training Framework in Respect of Intervention in the Specification for the International System and Guidelines for Teacher Education." (GC)

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Curriculum Experts Workshop on the Training of Curriculum Specialists

Bangkok, Thailand

19 - 25 October 1982

REPORT

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PART I

Part One: DESCRIPTION OF THE WORKSHOP

Introduction

Implementing Objective 1/5.4/03 of its Programme, Unesco convened a Workshop on Training Curriculum Development Specialists, to design and develop frameworks for training national curriculum developers. This training was specific to enhancing the competencies of young national curriculum specialists to be able to support, through the curriculum system, improved learning by children from disadvantaged environments, at the first level of education.

The countries represented at the Workshop have committed themselves to national programmes for the universalization of the first level of education. In these programmes, increasing numbers of learners from disadvantaged environments are entering the education system. They are often first generation learners in the school system. The current data, however, indicate that in many countries in the region, the achievement performances of these learners fell far short of expectations. Drop-outs and repeaters within grades are at unacceptably high levels. Countries in the region have expressed deep concern regarding correcting this situation which results in both acute wastage of precious resources and a negation of the national policies for social justice and human rights.

Objectives

The main purposes of the Workshop were as follows.

In the context of national programmes for the universalization of the first level of education:

- to exchange experiences in regard to new directions for action in curriculum development, specific to enhancing the achievement of learners from disadvantaged environments;
- to develop guidelines for the training of young national curriculum specialists in this respect.

Workshop participation

The participants at the Workshop were 10 senior curriculum specialists from 8 countries in the region with major ongoing programmes for the universalization of the first level of education (vide List of Participants - Annex II). In addition, 5 observers, 2 sponsored by UNICEF, also participated. Dr. Saisuree Chutikul provided valuable services as a resource person to the Workshop.

Workshop organization and activities

The Workshop was inaugurated with a Statement of Welcome from Mr. Raja Roy Singh, Assistant Director-General, ROEAP (vide Appendix). Following the inauguration, the Workshop, in its first plenary session, unanimously elected the following office bearers:

Mr. Sompong Palasoon	(Thailand)	Chairman
Mr. Ahadulla Akmal	(Pakistan)	Vice-Chairman
Mr. S.N. Dhaulakhandi	(India)	Rapporteur

Ratnaike, J., Education Adviser, Unesco ROEAP acted as the Secretary to the Workshop.

The Workshop was conducted in six plenary sessions and six small group sessions. Country experiences were presented at appropriate times in the plenary and group sessions. The Chairman and Vice-Chairman of the Workshop acted as Chairmen of the group sessions for groups 1 and 2 respectively, with the following as Group Rapporteurs.

Group 1 - Intervention in the specification of intended learning outcomes.

Rapporteur: Dr. Pablo E. Natividad (Philippines)

Group 2 - Intervention in the specifications for the instructional system and guidelines for teacher education.

Rapporteur: Mr. Abdul Mannan (Bangladesh)

The Workshop investigated the ways in which the curriculum system could assist in enhancing learning by children from disadvantaged environments, through appropriate interventions in the curriculum and instructional system.

Three important operational tasks of national curriculum development centres were selected by the Workshop for special focus, as possible means for introducing interventions towards improving learning by children from disadvantaged environments.

- The development of learning specifications or the intended learning outcomes.
- The development of specifications for the instructional system by way of methodologies and techniques.

- The development of guidelines for teacher education (in- and pre-service).

In the plenary sessions, Agenda Items 3,4 and 5 (vide Annex I) were discussed, with a plenary discussion of Agenda Item 6 prior to undertaking group sessions. The tasks of the group discussions were defined prior to meeting in small groups.

The last plenary session was devoted to the evaluation of the Workshop and to the presentation and adoption of the (Draft) Workshop Report.

Documentation

All participants sent in country case reports which became the major working documents of the Workshop.

In addition, a number of discussion notes were provided, which formed background materials for the discussion. (Vide List of Documents - Annex III). Participants also made use of a selected reference library provided at the Workshop, especially for the discussions in the small group sessions. National materials, including research papers and textbooks brought by participants, were on display at the Workshop, and provided concrete examples of the actions taken in the countries represented, for the enhancement of learning by children from disadvantaged populations.

Workshop report

The Report of the Workshop is in two parts:

Part One : Description of the Workshop

Part Two : Workshop Products

Acknowledgements

The participants expressed their appreciation of the Workshop and thanked Unesco for the opportunity to rethink action programmes in support of enhanced learning by disadvantaged learners. The participants also thanked the Resource Person for contributing so extensively and effectively to the deliberations.

Annex I

AGENDA

1. Inauguration of Workshop.

2. Election of Office Bearers.

3. Review of Workshop Schedule.

4. Identification of problems hindering achievement by learners from disadvantaged environments, at the first level of education.

5. Identification of actions that may be taken in the curriculum system to overcome these problems.

6. Development of design frameworks and guidelines for training national curriculum specialists.

7. Presentation of Draft Final Report of Workshop.

8. Closing Session of Workshop.

Annex II

LIST OF PARTICIPANTS

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Annex III

LIST OF DOCUMENTS

Information Papers

- General Information	ROEAP-82/CURTRA/INF.1
- Suggested Framework for Country Case Report	ROEAP-82/CURTRA/INF.2
- List of Participants	ROEAP-82/CURTRA/INF.3
- List of Documents	ROEAP-82/CURTRA/INF.4

Working Papers

- Agenda	ROEAP-82/CURTRA/1
- Schedule of Work	ROEAP-82/CURTRA/2
- Notes for Discussion	ROEAP-82/CURTRA/3 (8)
- Country Case Report	ROEAP-82/CURTRA/4 - Country

Appendix

Welcome Address of
Mr. Raja Roy Singh, Assistant Director-General
Unesco Regional Office for Education in Asia and the Pacific

Ladies and Gentlemen,

Although I am not present with you, much as I would have liked to do, I send you, on behalf of Unesco and on my personal behalf, special greetings of welcome to this Workshop which is concerned with developing training frameworks for national curriculum specialists in the context of learning problems of children from disadvantaged environments.

Universalization of the first cycle of education has been given renewed emphasis by the countries of the region. The emphasis in the countries has included not only the provision of services and facilities for the enhancement of enrolment, but also in regard to the level of achievement that is being reached by children who are in the first cycle of education. Unesco has a profound concern with these programmes.

The surveys of the outcomes of the first cycle of education in several countries of the region have indicated considerable shortfalls in achievement performance of children from disadvantaged environments. Furthermore, drop-out and school repeater data show that their incidence is very heavy on children from disadvantaged environments. In several countries, the dropping out takes place most prominently in the very early years of the first cylce of education.

These circumstances, of course, lead to a totally unacceptable wastage of the scarce resources countries are investing in education, and to regression into illiteracy of early school leavers. Equally, they prevent the achievement of the basic objectives underlying the national universalization programmes, including those noble humanitarian objectives related to social justice and human rights.

This disturbing situation is particularly critical when it is recognized that children from disadvantaged environments comprise the majority, or a substantial proportion, of the enrolled population at the first level of education, in many countries of the region. As the programmes for universalization gather momentum,

these proportions would increase. The new enrolments will come from populations in disadvantaged environments who, hitherto, did not avail themselves of the services for education or had limited access to the education system.

In this Workshop, you are focusing on the curriculum system. The experiences of the countries in using the curriculum system to enhance learning by disadvantaged populations will be studied critically and in detail, especially in terms of the specifications for the intended learning outcomes, the specifications for learning and teaching in the classroom, and the guidelines for the enhancement of teacher competencies.

It is likely that the analysis of the various problems underlying the poor achievement of children from disadvantaged environments will uncover a large number of determinants. This implies the need to provide priorities within these determinants so that intervention action may be planned systematically to obtain the greatest benefit in the shortest time. This also implies the identification of concrete and practical actions that can be taken to benefit the largest numbers of disadvantaged children.

I wish the Workshop success in its pioneering endeavours and look forward to receiving the report of your work and deliberation in a form capable of being implemented in the countries of the region.

PART II

Part Two: WORKSHOP PRODUCTS

Chapter One

IDENTIFICATION OF PROBLEMS HINDERING ACHIEVEMENT BY DISADVANTAGED LEARNERS AND ACTIONS TO IMPROVE LEARNING

A. IDENTIFICATION OF PROBLEMS HINDERING ACHIEVEMENT

The Workshop had several viewpoints on the definition and scope of 'disadvantaged populations'. Disadvantaged conditions may arise from economic poverty, social and geographical isolation, or from socio-psychological separation from the mainstream of development.

It was accepted that in many countries of the region, the populations living in rural areas should be regarded as disadvantaged in comparison with those in urban areas. Disadvantaged populations also live in urban areas, for example in slums, where levels of deprivation may be at least as severe as those in rural areas. It was also recognized that populations in remote, and inaccessible areas, and tribal or minority groups, may also suffer from various disadvantages.

The Workshop recognized that physically and mentally disabled children formed an important and special category of disadvantaged learners. Due to the particular attributes of these disabilities, the Workshop felt that these populations should be provided specially designed services. The current Workshop would, however, not be dealing with this category of learners.

Several countries represented at the Workshop had gathered evidence that the achievement performance of children from disadvantaged environments fell well below established national norms. The performance in language and mathematics was particularly low. In a few countries, this data has been used directly for designing education development efforts towards the removal of disparities in the educational performance of the learners. Countries have also made systematic efforts towards identifying and categorizing the specific problems that hinder the achievement of children from disadvantaged environments.

In identifying the problems that lead to hindering achievement of learners from disadvantaged populations, the discussions at the Workshop produced a vast array of problems, but provided special prominence to the following selected set.

1. Curriculum

Inadequacies in the curriculum in respect of learning by children from disadvantaged environments were highlighted by the participants. Among the most serious shortcomings were the following:

a) The lack of relevance and functionality of the curriculum in the socio-economic and cultural context of the disadvantaged learners, even though almost all countries had undertaken substantial revisions of their curricula. The new curriculum revisions have yet to focus specifically on learners from disadvantaged environments.

b) Assumptions of prerequisite competencies in children which, in fact, were available only in children from affluent situations.

c) Lack of specificity in the definitions of the intended learning outcomes, especially in regard to basic competencies, though a few countries have initiated work in this direction.

d) Lack of appropriate components in the curriculum and in the teaching-learning specifications which take special account of the activities of disadvantaged populations, in terms of their strengths and deficits.

e) Lack of harmony between the child's language and the language of instruction. Often the language of instruction in the classroom is significantly different from, or 'higher' than, the language competencies possessed by the children from disadvantaged environments.

f) Lack of parity between the learning strategies in the life patterns of the child from the disadvantaged home, and the strategies of teaching practiced in the school.

g) In many countries, the curriculum being overloaded, made it impossible to be covered at mastery level. Unnecessary overloading often occurred by unconnected stringing in the curriculum of unimportant details, usually at the level of factual recall, which were required to be memorized by the learners. Another aspect of overloading stemmed from the lack of convergence

between the cognitive demands of the curriculum and the stage of mental development of the learners. Too often, learning sequences were heavily weighted with formal deductive logic, for children whose learning should have been in terms of working with concrete objects and situations.

h) Children were generally assessed on a norm-referenced basis rather than on a criterion-referenced basis. This arises partly due to the traditions of selection, and partly due to the unavailability of carefully defined competencies which could form the basis for developing the criteria for the criterion-referenced testing.

2. Dichotomy between the home and school

a) There was often a wide gap between the types of learning experiences in school and those in the home. The learning content, socio-cultural values, learning and teaching styles, reinforcement techniques, cognitive bases, prevailing in the home, were often not found in the contrived teaching-learning situations in the schools. Nor were attempts made to bridge the two. The disadvantaged child had to live in 'two worlds' of the home and the school. The transition from one to the other was not easy.

b) Lack of parental interest and awareness in the activities of the schools and in the education of the child, further separated the home from school. This in turn increased the process of disadvantage and led to absenteeism, drop-out and stagnation, and poor achievement by those who remained in school. The lack of parental interest often stemmed from the school being considered an institution separated from the life of the community due to the school itself being designed to be an isolated island in the community, in terms of its activities, and even visually, in terms of its buildings.

3. Entry behaviour and language competencies

a) Children from disadvantaged groups when they entered grade I, came with inadequate oral language competencies in terms of the linguistic demands of the school. The sentences used by the children were generally short, gramatically simple, and often unfinished. The syntactical

form usually stressed the active voice only. Hardly any subordinate clauses were used. The sentence contained frequent non-discriminating words, such as 'this thing', or words with explicit rather than implicit meaning. Adjectives and adverbs were used only to a limited extent. The language limited not only the scope of expression but of thought as well.

b) On the other hand, there were linguistic codes in certain areas of language use, for example related to survival or activities in the farm, where the depth of language would be superior to that met in children from affluent environments. Yet these strengths were not provided recognition in the school system.

c) The limited nature of the spoken vocabulary and 'non-standard' structures of sentences of the children from disadvantaged environments, brought in added dimensions to the problems of communication in the teaching-learning situations. There was often a communication gap between the teacher and the disadvantaged child, especially at the beginning of grade I. This complicated the already difficult learning situation for the children from disadvantaged environments.

4. Teachers

a) Generally teachers serving disadvantaged populations in most countries were under-qualified in both content and pedagogy. Even those who have had general teachers' training did not possess sufficient competencies to deal with the severe and complex problems of disadvantaged learners, many of which were highly localized.

b) Low salaries, travelling distance to work and poor transportation, lack of housing, and similar factors, have contributed to a substantial lowering of the motivation of these teachers. Lack of motivation in the teacher manifests itself in absenteeism, poor preparation for teaching, indifference to the learning needs of the children, and lack of interest in improving oneself professionally. These in turn lead to a generally low level of teacher performance, which becomes habitually accepted by the teachers as the norm.

c) Remote locations in which the teachers lived and worked, placed them outside the receiving end of support and resource inputs, such as reference materials, supervision and in-service education, leading to stagnation in professional growth and the acceptance of difficult problems as being insoluable.

d) The under-qualification, the stagnation and the lack of motivation, resulted in the teachers, at best, ritually going through the motions of practicing the suggestions in guidelines for new curriculum implementation, but more commonly ignoring the guidelines provided.

e) Lack of housing and other facilities for female teachers as well as the prevailing value system which discriminated against females in some countries, made the shortfalls in the teacher situation even more acute in their adverse effects on learner achievement.

5. Recognition and diagnosis of learning difficulties

Teachers generally, have had no special training in remediating learning difficulties of children from disadvantaged environments. However, such training could not be undertaken unless the variety of learning difficulties that disadvantaged children face have been first identified. For this purpose, appropriate tools, tests and instruments for the diagnosis and evaluation of learning difficulties are required. Unfortunately, very few countries possess such instruments, so that constructive and designed intervention to eradicate learning difficulties through specially prepared materials and teacher training, has not been possible in most countries of the region. Thus learning difficulties accumulate and children from disadvantaged environments have been left with the assurance of inadequate achievement performance.

6. Physical facilities

In most of the participating countries, the physical facilities provided at the first level of education in disadvantaged environments were so inadequate that they interfered seriously with the normal functioning of the teaching-learning process. Provision of basic facilities, for sanitation, and drinking water were rarely made. School buildings were dilapidated. The chalkboard, if it existed, was of such poor quality that children found it difficult to read what was written on the board. Its placing was too often against the light, again making reading from the board difficult. Pin boards and other facilities did not exist. Body comfort for the child was hardly ever looked into, and mismatching chairs and tables against body sizes was common.

When furniture was not available, children had to sit on dusty floors. Exposure to wind, rain, heat, cold, was frequent. Lighting was as poor as ventilation. Acoustical conditions were equally poor. Learning-teaching equipment was not available. The general atmosphere was one of depression and neglect, and certain to demotivate children and impress upon them that the school was a miserable place to be in.

7. Economic poverty

Disadvantaged environments were frequently characterized by poverty. The low level of economic conditions at home invariably provided unsuitable and inadequate facilities and environments for learning by the disadvantaged children. Malnutrition also resulted from poverty and this had a direct bearing upon learning. It was noted that a lack of support by parents was oten due to their own economic poverty. The child's immediate contribution to the family in economic terms, however meager it might be, often got preference over the supposed long term gains through education.

The Workshop recognized that all factors such as those indicated above were present simultaneously in the learning environments of disadvantaged children, and have been present for years. It was not at all surprising that poor achievement followed inevitably from such adverse conditions.

B. ACTIONS TO IMPROVE LEARNING BY CHILDREN FROM DISADVANTAGED ENVIRONMENTS

The discussions at the Workshop pointed to a wide variety of actions that had already been taken in the countries represented, towards the improvement of achievement by children from disadvantaged environments.

Although some of the actions were, as yet, not at a level of national implementation, and still others were only at an initiatory stage, they, nevertheless, represented interventions specifically designed to solve the problems of poor achievement, by removing the inhibitory factors that have been identified as contributing to hindering of adequate achievement by children from disadvantaged environments.

These actions, and their further elaborations, provided guidelines for future actions that may be recommended by the Workshop for consideration in programmes for the improvement of learning by children from disadvantaged environments.

An important feature of the actions indicated by the participants was that almost all of them stemmed from the current concern in the countries about the removal of socio-economic and cultural disparities, and, in the education sector, the policy directives for the universalization of the first level of education. Thus, the individual actions reported were not

isolated events, but elements in a national strategy, even if they were still at an initiatory stage. These elements have to be placed in the national perspectives of a variety of macro policies and actions, such as the enhancement of the budgetary provisions for the first level of education, decentralized planning and new decentralized management practices.

Particular attention was paid in the discussions, and in the country papers, to the global improvement of management practices, which invariably hindered the implementation of quality improvements, even when appropriate designs for actions had been developed.

Participants reported various examples of management strategies that have been improved in the interest of better achievement performance by children from disadvantaged environments. A movement towards reducing the number of schools the supervisors have to deal with, and increasing the number of supervisors at the lowest administrative level nearest the schools in disadvantaged areas, seem visible in several countries. Further, these supervisors have been provided multi-functional roles related to improving the quality of education in disadvantaged areas, including on-the-spot and periodic in-service training of teachers, specially in respect of practical classroom learning and teaching problems. Headmasters, who are in-situ supervisors of the school system, have also been oriented towards increasing their sensitivity to short-falls in educational achievement by learners from disadvantaged environments. Some countries have established a 'cluster system' of schools, wherein approximately 10 schools associated around a 'Leader School' provide mutual support for various forms of quality improvement.

In a few countries, the sub-national administrative structure has been provided with periodic information regarding the performance of learners, and this acts as a pointed reminder to these educational managers regarding shortfalls in achievement by learners in their respective areas. In at least two countries, the pervasive concept of accountability in management has been provided special stress, with focus upon the education system's performance in respect of enrolment, survival in the education system, and enhanced achievement by particularly learners from disadvantaged environments.

A further management aspect was the identification of particular disadvantaged areas through a battery of data indicators, including data on school enrolment, drop-out, achievement, physical conditions of the schools, quality of teaching. Next the country as a whole was classified into geographical areas in terms of the existing developmental condition in each area, ranging from the depressed, disadvantaged and underserved, to the affluent and well served areas. This was followed by the setting of definite targets to be reached over a defined time period, for each area, according to its stage of development. Thereby, the problems of particularly disadvantaged areas were brought into sharp focus,

and priority assistance provided for them to reach their targets. The modalities for the delivery of education have been permitted to be changed according to the development condition in a given area, such as permitting part-time schooling or even permitting, temporarily, the reaching of only minimum standards. However, a designed intervention plan is put into action so that, over time, the targets for the disadvantaged areas are compulsorily revised upwards, until the recognized national norms are met.

The Workshop discussions highlighted the following types of actions that have been taken in the countries in terms of identified problems of achievement by learners from disadvantaged environments.

1. Curriculum

The actions countries have taken related to increasing relevance of what is being learned, extended, in some cases, beyond merely the use of local specific situations and materials. Several different connotations of the concept of relevance have been taken account of in the designs. A few countries, for example, have undertaken initial analyses of the cognitive demand of the existing curricula against criteria such as the stage of mental development of the child, so that cognitive relevance of the materials may be valid. The learning sequences were based upon manipulative activities to be done by the child, in all areas of learning, in keeping with the concrete operational stage of mental growth of the child. Sequencing of the learning (especially for self-learning modes) were being done such that the progress of learning was in small steps, ensuring maximum achievement and improved pedagogical relevance. Word counts and other pre-requisites for developing adequate language learning techniques for disadvantaged learners have been used in a few countries, to match the relevance of formative learning with the entry behaviours of the child.

Recently, curriculum structuring and learning strategies have been provided special attention in several countries. A few of them have established policies which emphasize mastery learning, and have specifically allocated a period of initial learning for the mastery of the 'foundations' (usually language and mathematics). The earlier assumption of possessing pre-requisites is no longer made. One country has extended this policy further into specifying a sub-stage within the first cycle of education to be devoted specifically to the mastery of the foundations, and other sub-stages to the reinforcement, application and extension of these foundations.

Closely associated with such actions were the careful specification of the intended learning outcomes, and, in particular, the definition of a set of competencies that would be mastered by virtually all learners, (other than those who had physical and mental disabilities). Defining intended learning outcomes in

competency terms permitted the retaining of national achievement specifications and standards throughout a country, and yet provided the flexibility of using relevant local specific content as vehicles for attaining the competencies. This increased the relevance of the learning substantially.

The policy of establishing mastery of defined competencies, carried with it the need for establishing criterion referenced testing as well as specific guidelines for the instructional system to assist teachers in their facilitating the learning for mastery. A few countries have used this specification as a rational and systematic means for reducing the curriculum overload, which itself had contributed, in the past, to the poor achievement of children from disadvantaged environments.

The specification of intended learning outcomes as competencies had the added advantage of providing greater flexibility (than a rigid content-specified curriculum) for selecting appropriate educational delivery options such as formal/non-formal hybrids, part-time schooling, reduced instructional time, according to the specific needs and constraints of particular groups of disadvantaged learners. Further, with the competencies defined, the planning for future development towards a uniform national standard may be systematically undertaken, with concrete targets specified.

2. Dichotomy between the home and the school

All countries reported a variety of efforts already undertaken to increase the support from parents to the learning by children from disadvantaged environments. In some countries home visits by the teachers were a regular feature, and personal inquiries were made regarding absenteeism or poor achievement. In addition to emphasising the importance of education for the future enhancement of the quality of life, some countries involved the parents and the community in the management of the schools, so that parental and community commitment would be forthcoming to the day-to-day functioning of the school.

Such measures were components of the wider strategy of overcoming the psychological and physical isolation of the school from the home and the community.

Other aspects of the strategy of bringing the school, and the home and community closer together, included the use of community resources (material and human) for school learning purposes; use of community problems as behicles for relevant in-school learning; use of methodologies practiced in the informal home and community learning, such as learning from interaction with elders and peers, and activity-based learning.

Some countries reported success in opening the school facilities to be used for a variety of community activities, including adult education, demonstrations by agriculture extension officers, and meetings of women's associations. Even the physical appearance of the school is being changed in some countries, with the planting of local vegetable, fruit and medicinal plants in the school premises, and landscaping, to provide visual homogeneity between the school and the community. All these activities have been shown to be capable of cementing an integral and functional relationship between the school and the home and community, for the co-operative education of the child.

3. Entry behaviour and language competencies

The Workshop recognized that a great deal has yet to be accomplished in taking into account the problems related to inadequate entry behaviours of children from disadvantaged environments. Several countries reported new directions of action in this area.

The question of language (mother tongue and/or medium of instruction) was discussed at the Workshop several times and at great length. Participants felt that the area of language learning was critical to all other learning in the school system. Success in language learning was a pre-requisite for success in achievement at the first level of education, especially for children from disadvantaged environments.

Many countries at the Workshop reported a number of actions that have been taken to overcome language deficits that characterize the entry attributes of learners from disadvantaged environments. Specific attention to oral language development was the most common and effective intervention. The actions included specific and designed training of the learners to enhance oral language, with time consciously allocated for the purpose at the beginning of grade I. A few countries have elaborated oral language training to be conducted in the context of real life events, taking the learners even outside the classroom for these lessons. The activities included both labelling of nouns and oral descriptions of actions, which developed verbs. Opportunities for practice were available through dialogues with the teacher, which provided the adult model, and through peer interaction, which provided opportunities for practice and reinforcement. Songs, drama, puppetry and other modalities were also utilized for the purpose of enhancing early oral language learning.

The general principle behind the methodologies was based upon the recognition that language intervention involved modifying a child's verbal environment in a manner that would facilitate the ability to induce the interactions among language content, form and use, (in the same manner of the child's natural learning of language in the home learning environment), but then extend and sharpen this ability, so as to enhance the scope of the language

being learned. This was particularly significant in the context of the paucity of verbalization in the home learning environment of the child from a disadvantaged environment.

At a later stage, more conscious emphasis was provided to comprehension. Only after established standards in oral language had been reached, were reading and writing taught.

These aspects of intervention in language learning applied to the learning of the mother tongue as well as the learning of a language which was not the mother tongue. However, several countries stressed the utmost importance of early language learning, and indeed all early learning, being done in the child's mother tongue, and only subsequent and gradual movement into the 'official' language medium of instruction. This has become an accepted policy in many countries in the region.

The importance of language readiness was also stressed. In some countries, actions even reached back to designed training in auditory and visual discrimination and in symbolization, prior to the beginning of 'formalized' language learning in school. Time for such training had been found by establishing a national network of specially designed early childhood or pre-school learning centres. Other options used were readiness activities during one to three months just prior to entering school, but using the school teachers and facilities, or even using the first one to three months of the time in grade I for such readiness training.

For effective design of actions that may be taken in regard to language deficits, the experience of the countries that have undertaken these tasks for remediation in language showed that it was essential that the entry language characteristics of the child be known in the degree of detail sufficient to permit the design and development of action sequences for early language learning. The extent of detail would need to include word counts, the specific language codes the child uses, the grammatical structures and sentence forms, the nature of meanings that are implicit as well as explicit, and the social communication and linguistic interaction patterns.

In the intervention actions, the placing of the child in language situations that were important and relevant to the child or ones in which the child felt confident, (such as using activities the child was already competent in), assisted in the efficiency of the language acquisition. Such language situations have to be identified and analysed for linguistic content prior to the designing of learning sequences. This experience of countries was specially important when attempting to increase verbal abilities of children from disadvantaged environments who already possessed an extensive background of actions (such as household and farm tasks) they were competent in, even before they entered school. These actions can form the basis for teaching increased verbalization.

The Workshop discussions added that while the language deficit of the child from disadvantaged environments, vis-a-vis the school learning, was a very significant factor in the poor achievement of the child, there were aspects of language which the child was competent in, which arose from learning for survival in disadvantaged environments. These could be utilized effectively in curricula. They could provide opportunities in the learning sequences for the child from the disadvantaged environment, to demonstrate this superior advantaged as compared to the child from an affluent environment. The superior language codes such as multiple words for what could be a single generic word in the urban affluent environment, often reflected more acute linguistic discriminations of meanings or concepts learned in life and for life, in the disadvantaged environment. The usual practice of seeking standards and content from only affluent environments shuts out the use of these potential strengths of the disadvantaged child. Hence the necessity for identifying such aspects in the environment of the child, and including them in the learning sequences.

In a similar manner to language learning, participants indicated the importance of actions for mathematics learning, especially for children from disadvantaged environments. At the very early stages, there was little distinction between pre-language learning, as would be anticipated from the level of mental development of the child, manipulative activities have to form the basis of the learning.

4. Teachers

A major effort has been made in most countries, to enhance the operational efficiency and quality of the teachers serving disadvantaged learners, even though their large numbers and their inaccessibility are still serious constraints to wide-scale improvement programmes. An impressive range of actions, providing for several options, is a characteristic of these efforts.

Increasing use of decentralized in-service education has become a regular feature, with either mobile resource teams providing the training or local core cadres trained to act as master teachers, or both modes used together. The content of the training has become more clearly focused upon practical classroom problems, particularly those associated with the implementation of new curricula and learning difficulties of children. Training strategies, in a few countries, have even moved towards opportunities for trainees to work with children during the in-service training courses, so that realistic practice as well as theory are covered simultaneously during these courses. Some countries have also incorporated production-cum-training modes, in that the in-service courses incorporate the production, by the trainees, of learning-teaching aids, remedial teaching sequences, lesson plans and test items, as an integral component of the training. These materials are then taken back to their classrooms by the trainees.

Many countries have initiated different kinds of self-paced distance learning for teachers, some in association with the broadcasting media, to maintain quality improvement of teachers even when face-to-face sessions are not possible. This has led to a few countries developing condensed and capsulized teacher education courses, removing some of the overloading that has been found in traditional pre-service courses. The implications of research data on learning by children from disadvantaged environments are beginning to find their way into these courses.

Decentralized resource centres are rapidly being established in most countries. They vary from highly institutionalized regional or sub-regional centres having considerable facilities, to relatively simple 'rooms' in ordinary schools in remote areas, which local teachers from neighbouring schools can have ready access to. Cluster school arrangements have been developed in some countries, with a leader school performing the function of providing the needed resource inputs to less advantaged schools. Whatever the type of decentralized resource centre, one common feature seems to be the increasing investment in providing practical, immediately usable materials, such as lesson plans, at these decentralized locations.

While less efforts were reported in pre-service education as compared to in-service education, yet a few countries have reviewed their curricula with a view to incorporating more elements that refer directly to the conditions that prevail in the classrooms of the disadvantaged areas. For example, several countries have introduced specific training for dealing with the problems of multi-grade teaching in small remote schools. Others have designed new courses related to early childhood education, covering the learning and teaching at pre-school, grade I and II, as a composite area of training. Still others have stressed new competencies required of teachers in their interaction with, and use of, the community to further the education of children.

Other improvements to the teacher situation relate to attempts at local recruitment of teachers to reduce absenteeism and increase commitment to the tasks of educating children; provision of housing facilities; and provision of special allowances for working in disadvantaged areas.

5. Recognition and diagnosis of learning difficulties

Special emphasis was given in the discussions at the Workshop to the importance of diagnosis and remediation of language and other learning difficulties during the course of learning, although only a few countries had, as yet, initiated action in regard to diagnostic testing and remediation. It was, however, recognized that the movement for defining competencies and developing criterion-referenced tests had assisted greatly in providing basic data and preliminary instruments for further work in identifying learning difficulties. A major problem, as yet unresolved, is the classroom management of remedial action,

assuming that the learning difficulties have been identified and appropriate remedial materials and sequences designed. Especially with underqualified teachers and relatively sparse resources from the community in disadvantaged areas, the actual implementation of actions to correct learning difficulties faces major constraints.

6. Physical facilities

Physical facilities were being improved, as rapidly as financial constraints permitted, in all the countries represented at the Workshop. An important direction of improvement is the recognition, in several countries, that furniture and fittings should be designed to fit the user not the reverse. Thus, to initiate production of furniture with this criterion, several countries in the region have collected body-size data of children in various grades. Preliminary work in disadvantaged areas has also been initiated in improving illumination, thermal comfort multipurpose storage spaces, accommodation arrangements for minimum movement around the school, classroom sizes and alternatives to traditional desks and chairs, such as squatting tables and other seating and writing surfaces. School site improvements, such as for play space, sanitation and safe drinking water have also been given attention in disadvantaged areas.

In addition, such strategies as using spaces available in the communities for other functions were being mobilized for school teaching. For example, mosques which are present even in remote areas and which always remain open to the community, have been transformed during 'school hours' to function as school buildings. Personnel from the mosques act as the teachers, after suitable training. Appropriate equipment is gradually being supplied to schools in disadvantaged areas, and greater use of environment-specific equipment, such as farm tools, domestic utensils for in-school educational purposes is being encouraged.

The general feeling at the Workshop was that a great deal was already known and practiced, to some extent, in the countries in regard to improving learning by children from disadvantaged populations. These actions have to be improved in specificity, and widely implemented urgently, so that national impact may be available in the shortest time.

Chapter Two

EXEMPLAR TRAINING FRAMEWORK IN RESPECT OF INTERVENTION IN THE SPECIFICATION OF INTENDED LEARNING OUTCOMES

(Report of Group 1)

In the plenary discussions, a large number of problems were identified, which were hindering adequate achievement by learners from disadvantaged populations. Some of these problems, though remarkably important, were not ones which could be intervened upon by the curriculum system. For example, the curriculum system is unlikely to do much about removing several of the adverse effects of poverty.

Even the subset of problems that lend themselves to intervention through the curriculum system is still large. In the time available at the Workshop, it was considered prudent to focus on a major area, and provide analyses and suggestions in some detail so that these may act as exemplars for similar analyses in regard to other areas.

Several countries have already attempted to specify a set of learning specifications which they then proceed to ensure mastery achievement by all learners (not counting the mentally and physically handicapped who need special programmes), with particular assistance provided for overcoming the various hindrances that appear in disadvantaged environments. Group 1 discussions focused upon this major action as a priority, to identify the particular competencies young curriculum developers should possess, to be able to develop and define the intended learning outcomes for the learners to master in the school.

It was recognized that the decision to define a set of learning specifications to be acquired at mastery implied a break from the traditions of selectivity at the first level of education. The selectivity itself has blinded educational personnel to the acute problems of disadvantaged populations, since it was 'expected' that a large number should 'fail' in the selective tests. Simultaneously the decision implied the acceptance of mastery as an educational stragegy, and a portion of the first level specially earmarked for being a foundational stage (this being grades I and II in some countries and grades I,II,III in others), at which basic competencies would be mastered.

Group 1 then set itself the task of analysing how the set of learning specifications may be established. In this respect, two aspects were developed:

i) entry characteristics of the learners; and

ii) expected learning competencies.

In regard to the entry characteristics of the learners, the Group recognized that the significant attributes included the following:

- Status of mental development
- Entry behaviours in language and mathematics
- Knowledge regarding the environment
- Activities the child was competent in.

In regard to the expected learning competences to be mastered the Group identified the following:

The learning competences would:

- be sufficient to support subsequent learning sequences;
- be established on the best available evidence;
- specify pre-language and pre-mathematics competencies;
- specify word lists to be mastered;
- specify expected sentence structural patterns to be mastered; and
- specify mathematical systems and symbols to be mastered.

The Group then proceeded to identify the specific competencies that curriculum specialists should possess, to be able to perform their tasks in these respects.

The required types of competencies for each of the instructional areas identified implied the following significant aspects:

i) Possess the theoretical bases for mastery as a pedagogical strategy, and for criterion referencing as compared to norm referencing.

ii) Possess knowledge of current data in one's country and in other countries, regarding learning and concept formation, particularly by disadvantaged populations, and possess the capacity to translate and interpret the data in the context of particular learning specifications, (for example, in the context of language and mathematics specifications).

iii) Be able to identify, analyse and investigate activities in which the learner is competent, in every day life, for their implied status of mental development.

iv) Be able to obtain word counts and other aspects of oral language, and mathematics, and analyse these in regard to potential deficits and strengths, and in relation to activities the child is competent in.

v) Be able to identify, analyse and investigate knowledge of the environment possessed by the child and activities the child is competent in, in the child's home and community.

vi) Be able to make scope and sequence analyses, consisting of psychological and content analyses of subject matter, of the subsequent learning, and place the current specifications in context.

vii) Be able to obtain research data and be able to investigate current situations in schools and develop the necessary research skills to test and modify learning specifications.

viii) Be able to obtain a collection of words commonly used by children and commonly used in the area from which the children come, and be able to decide which new words should be learned so that the child may develop beyond the confines of the child's environment.

ix) Be able to define suitable sentence structures commonly used in the child's social interactions, be able to decide suitable sentence structures which will support subsequent learning.

x) Be able to specify symbols to be mastered and be able to define simple mathematical operations.

xi) Be able to define pre-requisite pre-mathematics skills.

xii) Be able to define pre-language competencies related to fine motor movement and visual and auditory discriminations.

With this identification of competencies, the Group 1 proceeded to develop a relevant training framework for young curriculum specialists so that these competencies may be acquired. However, Group 1 considered it necessary to place such training in the context of general shortfalls recognized in curriculum specialists in the countries, especially in the context of the tasks for enhancing learning by disadvantaged learners.

Group 1 felt that many curriculum specialists suffered from a lack of knowledge of the experiences in other countries and sometimes in their own country. Some of them were not even familiar with the principles of curriculum development and with the theoretical knowledge, both psychological as well as pedagogical, that formed the foundations for such principles. Rarely were they in possession of paddy-roots experience, including knowledge of parental attitudes. The principles for transferring this knowledge into learning materials, were equally unknown. Research and investigatory approaches and appreciation of the philosophy of interaction with people and situations were also rarely internalized. Some of them may not be aware of the rules of administration and management which control the system, and therefore unable to take in this important dimension in their curriculum decision-making process.

While these shortfalls were recognized, the constraints of the load of work at curriculum development centres, and of the lack of resources, require the recommended training programmes to have great flexibility and therefore be capable of falling in or integrating with, the day-to-day operations of the curriculum development centres. For example, the official assignments provided to the curriculum development centres cannot usually be differed due to tight time deadlines set by higher authorities. Generally, the training programmes, Group 1 recognized, have to be geared on an 'on-the-job' basis, with the training merged into the regular operation of the curriculum development centre, so that the official assignments may still be completed without undue delays, and yet the training also made available.

Lack of time and resources also required a training programme to cover, simultaneously, several shortfalls in any one activity of training, and also cover the enhancement of paddy-roots experience and expertise in economically selective areas of operation. For example, while it is recognized that paddy-roots experience is not sufficient in the curriculum specialists, time and other constraints require selective provision of this experience rather than the provision of the total universe of paddy-roots experience. Similarly, provision of theoretical knowledge must link closely with the transfer of this knowledge immediately into the operational activities of the curriculum centre.

Group 1 considered that these characteristics of the training programme signalled the need for a variety of cyclic modalities so that curriculum specialists could acquire pre-defined competencies at various times in their operations, according to the availability of time and other resources. Cyclic operations would also permit the functional use of the training for specific aspects of the official assignments the curriculum specialists may be engaged in.

Quite often, a serious bottleneck was the non-availability of suitable trainers for training the curriculum specialists. Theoreticians may be available, but they may not be capable of translating the theory into the practical requirements of the curriculum activities. They may not have paddy-roots experience either. The theories themselves may not apply in their totality, to the national situation. Those resource persons with grass-roots experience may not have the theoretical background in sufficient depth for the functional purposes of the training programme, such as interpreting field data in terms of theory. These factors may require a careful re-orientation of the trainers in the context of the training programme.

Group 1 emphasized that a training programme that incorporates these complexities may also demand complicated management practices in the programme, especially if investigatory approaches form the major component of the training and the trainees have to participate directly in activities involving learners from disadvantaged environments.

Taking into consideration these attributes of the training programme, Group 1 considers the following framework as indicative of the nature of the training that may be required for curriculum specialists. The training framework is not intended to be prescriptive. It is very likely that several significant modifications may be required in the individual national situations. However, the framework of the training programme has attempted to be selective in the experiences, provides for poly-functionality in the training activities, links theory to field investigatory data, incorporates production and training, and places the training in a cyclic operational sequence.

The Group 1 indicates the following as an example of such a training programme, taking the task to be the development of learning specifications for mastery at the foundational stage (say, grades I,II), of language and mathematics.

a) Training through empirical investigatory activities

(With particular reference to comparing learners from disadvantaged and affluent environments, in their school and in their home environments before school age and during schooling)

i) Language development (various aspects such as labelling, verbal mediation, practice and reinforcement, word count, sentence structures and other language aspects).

ii) Perceptual constancy and perceptual learning.

iii) Thinking (cognitive) processes.

iv) Teaching and learning styles.

v) Conditions that enhance learning.

(Curriculum specialists must visit school classes, especially in disadvantaged areas. These visits are to acquaint them with the real teaching and learning situation. They will need guidance in what to look for and what judgements to make).

b) Training in theoretical background

(Based upon the above empirical investigations).

i) Theories of development, as they do and do not apply to the results of the above empirical investigations and to other national data:

- cognitive development and cognitive functioning;
- personality development.

ii) Theories of motivation, as they do and do not apply to the results of the above empirical investigations and to other national data:

- relationships among learning, performance, motives;
- conditions that enhance motivation for learning and performance.

iii) Theories of learning, as they do and do not apply to the results of the above empirical investigations and to other national data:

- conditions of learning;
- varieties of learning;
- styles of learning;
- cumulative learning;
- transfer of learning.

c) Production-cum-training

i) Using the inputs from (a) and (b) above, the development of intended learning outcomes for mastery in respect of the following:

- pre-language
- pre-mathematics
- grade I language
- grade I mathematics

- grade II language
- grade II mathematics

ii) Investigation of the effectiveness of the above through field testing, using appropriate samples (after developing relevant specifications for the instructional system and guidelines for teacher training).

iii) Identification of shortfalls in effectiveness of the above through data analysis and investigation.

iv) Identification of further empirical investigations necessary to correct shortfalls such as:

- analysis and investigation of activities the learner is competent in, in every day life, for the implied status of mental development;
- survey and analysis of word count and other aspects of oral language and mathematics, in regard to potential deficits and strengths, and in relation to activities the child is competent in;
- analysis and investigation regarding the child's knowledge of the environment, and activities the child is competent in.

(Curriculum specialists must be able to give demonstration lessons so that teachers and teacher educators can have a clear idea of the desired teaching and learning system).

d) Training through investigatory activities (second cycle)

Undertaking investigations of problems and new resources identified in (c) above.

e) Training in theoretical background (second cycle)

(Focused upon the empirical investigations in (c) above), such as the following (for language development):

i) Interactions among linguistic forms (conventional language modes; non-linguistic components (physical objects, events); and social interaction (communication).

ii) Analysis of learning tasks in reading (verbal factor, explicitly expressed content, implicitly expressed content, appreciation, etc.).

iii) Reading as information processing (involving grapho-phonic, syntactic, semantic).

(The particular theoretical background required at this stage will depend upon the nature of the short-falls identified in (c) above, and the nature of the empirical investigations in (d) above. However, as in (b) above, the theory should be considered as applicable or not applicable to the empirical investigations at (c) and (d) above).

f) Production-cum-training

Revision of specifications produced at (c) above, and field trial.

(This cyclic process may be continued according to the availability of time and other resources).

It should be noted that the above analysis of curriculum activities competencies for young curriculum specialists, and the framework for the training programme, have been determined in terms of the foundational stage (grades I,II,III). This has been done to stress the importance of this stage, and also to illustrate the nature of the analyses and of the training programmes needed. However, Group 1 emphasized that similar analyses, specifications of competencies of curriculum specialists, and development of appropriate training programmes, would be needed for the post-foundational stages over the whole first level of education, and indeed other levels as well. Such actions would take into account the different characteristics and demands at these post-foundational stages, in terms of superior learning by children from disadvantaged environments, such as practice, reinforcement, application and extension of the foundational learnings.

A further level of detail in the training design, beyond the above training framework, is provided below as a concrete illustration. It indicates a training format for developing pupil learning materials for language learning at grades I,II.

Training format for curriculum developers in the production of pupil learning materials for language (grades I,II)

a) Objectives

i) General objective: to train the curriculum developers in producing appropriate learning-teaching materials for disadvantaged children, in language, for the early grades (grades I and II).

ii) Specific objective:

- To identify problems of vocabulary and of language usage, of the disadvantaged groups.
- To identify expected language behaviours of the children in grades I and II.
- To develop strategies to deal with the problems.
- To develop sequentially graded materials for pupil learning in language.

b) Content

i) Concept formation.

ii) Nature and causes of language disadvantage.

iii) Types of language usage of disadvantaged children.

iv) Effect of environmental factors on the development of language skills.

v) Objectives of language learning for grades I and II.

vi) Competencies in language learning for grades I and II.

vii) Methods and techniques of preparing graded language learning-teaching materials for grades I, II, including those for the enhancement of oral language.

viii) Evaluation of language learning materials.

ix) Evaluation of learner achievement.

c) Workshop strategies

i) Theoretical inputs.

ii) Group discussions:

- Identification of gaps in language development at home and at school and gaps between groups of children.

- Development of strategies for bridging these gaps.

iii) Practical work on materials development.

iv) Field try-out and revision of materials.

d) Evaluation of the workshop

i) Evaluation of the Workshop process.

ii) Evaluation of the Workshop products.

The organization and implementation of such training programmes require careful planning. The accurate specification of objectives and outcomes; the analysis of the tasks involved and the content to be covered; the operational details of the training strategies; the selection and briefing of the resource persons and trainers; the selection and annotation of the resource materials; the instruments and methodologies for the monitoring and evaluation of the training, are among the planning activities that have to be completed prior to the training. After the training, the impact of the training on the practical tasks the curriculum specialists will be engaged in would also have to be monitored.

Other vehicles for training that may be utilized, depending upon the availability of resources, would include the following:

a) Action research studies-cum-training on the job.

b) Training through study tours and attachments.

c) Long-term institutionalized training programmes in the country and abroad.

d) Modules and self-instructional materials for curriculum specialists.

e) Special workshops for specific areas.

Chapter Three

EXEMPLAR TRAINING FRAMEWORK IN RESPECT OF INTERVENTION IN THE SPECIFICATION FOR THE INSTRUCTIONAL SYSTEM AND GUIDELINES FOR TEACHER EDUCATION

(Report of Group 2)

A very common form of intervention by curriculum specialists in the instructional system in regard to teaching and learning activities, is through textbooks and teachers' guides. Unfortunately, the teachers' guide intervention, too often, restricts itself to merely specifications for 'teaching' the textbook. Simultaneously, the textbook is equated to be the whole learning situation in the classroom. A few countries have, however, taken action to cover the total learning environment. For example, curriculum specialists in one country have developed 'writing briefs' for authors of textbooks and teachers' guides and designers of other learning-teaching aids, which include specifications not only for the basic content competencies, but also for other elements in the total learning scenario of the child engaged in learning the content. These writing briefs cover specifications for aspects such as the following: competencies; illustrative content; learning-teaching strategies; vocabulary; evaluation; specifications for textbooks in the context of the total learning environment; specifications for the teachers' handbook in the context of the total learning environment; and specifications for other learning-teaching aids, such as for audio-visual materials and equipment.

Examples from other countries show teachers' guides which cover basic pedagogical variables, identified learning difficulties, suggestions for remedial actions, recommendations for the initiation, application and reinforcement of classroom learning using real life situations, and practical points related to specific areas such as moral or work education. These specifications for the instructional system developed by curriculum specialists may appear in the teachers' handbook or may appear in a series of handbooks specific to particular areas.

However, aside from the implied signals for teacher education available in the teachers' guides and schemes of work for classroom teaching, few curriculum development centres provide systematic guidelines for the training of teachers. Generally, this shortfall has been met by associating curriculum specialists themselves in the training of teachers, particularly for in-service education.

The urgency of the needs, especially in disadvantaged areas, for efficient and effective teacher training, has emphasized the importance of focused guidelines specific to the activities teachers will be involved in, in teaching children from disadvantaged environments. The wider specifications, beyond merely 'teaching the textbook' also require more carefully designed teacher training programmes, thereby implying an equally well designed set of specifications from curriculum specialists to be used for teacher training. These more elaborate guidelines in turn mean that curriculum specialists developing such specifications require new competencies. The derivation of these competencies requires a clear analysis of the content and context of guidelines in the area of teacher education geared specifically to support enhanced achievement performance by children from disadvantaged environments.

First, it was considered necessary to identify the kinds of specific methodologies to be used in the instructional system, that may be recommended as being capable of contributing to the superior learning by children from disadvantaged environments. These methodologies would be applied in the context of the specification of intended learning outcomes, and incorporated into the newly designed textbooks, teachers' guides and guidelines for teacher training.

Second, it was equally important to consider the recommended profile of competencies of the teacher in the classroom who will have to deal with, and facilitate, superior learning by children from disadvantaged environments. These competencies have also to be expressed, in context, in the teachers' guides and, of course, in the guidelines for new teacher education programmes.

This double analysis, taken together, would form the composite set of signals for the development by the curriculum system, of improved textbooks, other learning materials, teachers' guides, as well as design suggestions for teacher education programmes.

The training of curriculum specialists to be able to perform these tasks of specifying for the instructional system may be conducted using the production-cum-training cyclic mode indicated in the Report of Group 1, with the content of the training drawn from the identified tasks indicated in the rest of this Report.

Group 2 identified the following types of learning-teaching methodologies that may be particularly helpful in enhancing learning by the disadvantaged child population.

1. Peer-learning

By peer-learning is meant learning from one's own age group or from age groups near one's own. A considerable amount of learning by a child in the home environment takes place through interaction with peers over a relatively narrow age range spread. This methodology may be effectively applied in the classroom as well, and will form an effective bridge between the learning environments of the home and the school. In the school situation, the brighter child can help greatly the learning of an average or below average child of the same grade, thereby contributing substantially to the learning process of the entire grade. Similarly, children a few years older could contribute substantially to the learning by younger children.

Recent research in social interaction has indicated support to the observed efficiency of the primeval strategy of peer learning. The child's mental development is enhanced if she is allowed more social interaction with other children. The process involved goes beyong merely social nourishment. The child has to make accommodations in the dynamics of peer interaction, which process itself assists in adaptation and assimilation, and consequently, in the growth of competencies and concepts.

Curriculum specialists would need to develop specifications for textbooks and teachers' guides and suggestions for teacher education, which exploit the significant potential for superior learning by disadvantaged children available in the methodology of peer learning.

2. Self-learning

Developing competencies for self-learning or learning to learn is a major goal of education efforts for all children. In the case of children from disadvantaged environments, it becomes even more important, considering that the child has relatively little by way of resources in the disadvantaged home and the environment (as compared to the affluent home and environment), to support automatically many aspects of school learning. Providing opportunities for self-learning involves specially designed learning sequences, materials, competence in the teacher to provide a facilitating role, rather than that of a surveyor of knowledge, as well as new classroom management techniques to permit self-paced learning.

Being able to learn at one's own pace provides the slow learner an opportunity to learn at mastery, which would not be present if the class pace is focused upon the average or above average child. While self-learning does not necessarily require a basic level of literacy and numeracy, most school-based learning, from written or printed materials, would demand this basic level. Self-learning, combined with group learning in which peer learning also contributes to the learning process, has been found to be a remarkably efficient methodology for enhanced achievement.

Specifications for the instructional system developed by curriculum specialists for textbooks, other learning materials, teachers' guides and teacher education, would require specific emphasis on this methodology in the context of the identified intended learning outcomes.

3. Learning from the environment and the home

Learning by children, as indicated by changes in their knowledge, skills and attitudes, starts well before the child enters school. The continuation of this learning process (which is natural to the child), once the child enters the school, helps to make a psychological bridge between the home and school learning systems. With the stress on functionality and relevance of education, focusing the education of the child on the child's environment becomes a vital methodology, for enhancing motivation, and fostering deeper understanding, starting with the familiar and the known.

The disadvantaged child, particularly from rural environments, has a vast repertoire of environmental experiences which can form the starting point for further formalized learning. Such a start provides the opportunity for the disadvantaged child to acquire self-confidence and self-esteem. These affective domain objectives are generally under-valued in the usual school situations. Aside from using the child's environment and home learning during the formative stages, the further learning may be so designed to find application and reinforcement in real life situations, in the environment of the child.

Specifications for the instructional system would require concrete examples of learning from the environment and the home or indications of situations for learning from the environment, rather than general statements of, or pontifi cations on the broad benefits of such methodologies.

However, the danger of locking the disadvantaged child into a poverty environment has to be consciously dealt with, by using the environment and home learning as an initiator, and possibly a reinforcing vehicle, but extending this further so that the child may develop beyond the poverty constraints. Activities related to improving the quality of life through applying the school learning, analyses using critical thinking and problem solving, are some of the methodologies that may also be used to overcome this danger. These aspects too have to be stressed in the specifications for the instructional system developed by the curriculum system, and thereby for teacher education as well.

4. Using locally available resources

The methodologies indicated above, all imply automatically the use of locally available resources, both human and material. Aside from the above, further use may be made of local resources. A wide array of scientific principles, for example, can be taught and learned using locally available tools, utensils, plants, animals, craft, farming and household practices. Similarly, folk songs, stories, drama and other aspects of the artistic and cultural heritage may be mobilized effectively for learning, at least in such areas as language and social studies. Bamboo, stones, leaves, fruits, seeds can form the basis for activities in learning mathematics. Persons with specialized skills in the community may be invited to the school to help effective learning of the child. Carefully designed out-of-school activities can involve children using local objects, activities, and places as resources and as effective situations for reinforcement and application of learning.

As with the previous methodologies, the specifications for the instructional system, through textbooks and other learning materials and guides for teacher education, developed by curriculum specialists, would need to illustrate the recommendations for using this particular methodology with many concrete examples and leading suggestions in the context of particular and individual intended learning outcomes.

5. Learning through activities

Children (whether they be advantaged or disadvantaged), at the primary level, are functioning at the pre-operational or concrete operational stages of mental development. The child's operations are focused upon concrete objects and actions in the immediate present. Projection into the 'potential' is limited. The stage of mental development does not make it possible to perform the mental extrapolation of considering in conjecture, the 'real' as a special case of the 'possible'. But the child is able to organize and order objects and events, if self-manipulation is joined to the learning activity. Through the manipulative activity, concept formation develops. Each of the groupings which the child develops in this period of mental growth remains an isolated organization and does not form an integrated system of thought. These two critical attributes of the mental development of the child at this stage emphasize the relative inefficiency of learning based exclusively in terms of verbal factual knowledge to be acquired and stored. Passive participation in a highly verbal atmosphere is particularly unproductive for children from disadvantaged environments, whose major vehicle of prior learning and continued learning outside school, in the home and community learning system, is learning in and for life, organized through psycho-motor action for the development of the cognitive and the affective. Thus learning through participatory manipulative activity is an essential methodology that matches the stage of mental development, as well as the sociological and cultural practices of the child from disadvantaged environments. The manipulative activities have to become the bases for learning all areas, whether they be language, mathematics, social studies or science. If the manipulative

activities used, at least to begin with, are those familiar to the child, such as those the child is already competent in, in the home and the community, the learning is even more effective.

The specifications for the instructional system, developed by curriculum specialists, by way of textbooks, other learning materials, and teachers' guides, schemes of work, lesson plans, and suggestions for teacher training, would need to indicate specific illustrative examples of manipulative activities the learners themselves can engage in, in the course of their learning, drawn from the home and community learning situations, as well as contrived activities suited for formalized classroom learning. In addition, further examples of manipulative activities to be used for practice, reinforcement and application of learning especially outside the classroom, should also be indicated.

6. Multiple grade teaching

The teaching of more than one grade simultaneously by a single teacher is a common feature in many countries in the region, especially in disadvantaged areas. The acute shortage of teachers in these areas, and the economic costs of placing more teachers in schools with small enrolments, make this modality almost inevitable for a considerable time in the future. Educational actions have to face up to this reality in the instructional system, and curriculum specialists have to design practical specifications to meet, and make use of, this teaching-learning situation. A number of methodologies may be used to overcome the problems in multiple grade teaching, such as the use of group work, peer learning, specially designed self- and group-learning materials, para-educational assistants drawn from the local community or the pupils themselves assisting in the teaching situation.

There are also clear advantages in the situations which are forced to have multiple grade teaching. Since the numbers of learners are usually small, it is possible for the teacher to know the children better and cater to their individual needs and learning difficulties. Since there is relatively less time for direct teaching, the 'opportunity' is forced upon the teacher to practice intensive teaching and extensive

practicing, using a variety of flexible learning-teaching modalities. The learners have considerable opportunity to establish competencies in self-learning and learning to learn, if this methodology is carefully designed into the learning-teaching situation. Peer learning and the use of the learners themselves as teacher assistants provide opportunities for developing the learners' personal capacities, self-esteem and self-confidence. These advantageous aspects may be mobilized in the development of specifications for the instructional system.

The specifications developed by the curriculum specialists would need to have particular reference to the conditions of multigrade teaching illustrating the methodological implications for this situation with concrete and exemplar learning episodes involving all the techniques for improving learning in this difficult situation. For the learners themselves, special self- and group-learning materials would need to be developed. The specifications for the instructional system would need to make careful resolution of the intended learning outcomes, or of learning sequences for a particular intended learning outcome, indicating recommended utilization of the 'teacher teaching' input and the self- and group-learning input in the learning-teaching situation. Thus, in particular, the teachers' guide and suggestions for teacher education, need to be very carefully developed to take in the many facets of this complex delivery modality.

7. Mastery learning, criterion referenced and diagnostic testing

Particularly at the early stages of the first level of education, the competencies defined for these stages have to be mastered by all children (except perhaps those that are physically and mentally handicapped). This methodology involves first defining a set of competencies to be mastered, second designing the learning situation to ensure mastery, and third establishing clear criteria for mastery performance, and criterion-referenced testing, to check whether mastery has been reached, and fourth individualized remedial interventions for those children who have not reached mastery so that these too can achieve mastery in the defined competencies.

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Specially important are the provision of adequate assistance to the learners as and when they have difficulties; provision of adequate time for learning; provision of opportunities for practice, reinforcement and overlearning.

Implicit in these components of the methodology are the following elements:

- Individual children do not differ in their capacity for learning (except in the cases of the physically and mentally handicapped). Rather, individuals may differ in their capacities to benefit from a particular instructional mode or form.
- Individuals do not have a single capacity to learn. They have a variety of capacities, some adaptive to certain instructional modes, others to other modes.

Still other design aspects are also implicit in the concept of mastery learning, such as that a learner either masters or fails to master a desired learning outcome as defined by the criterion for mastery. There are no degrees in the attainment of mastery outside the criterion used. The performance of the learner is also not judged with reference to the learner's relative position in the class.

While mastery indicates the effectiveness of the learning process in producing the desired learning product, two other important and related concepts in regard to learner achievement are:

- Competency, which in fact is a two dimentional concept, of which the first is mastery, and is the intellectual component of competency; and the second, the attainment of self-confidence in the sense of being able to cope. This would equate to the emotional or affective dimension of competency.
- Proficiency, which involves the efficiency of the use of the learning product once it has been acquired. As with competency, mastery is a pre-condition for proficiency.

But, a fundamental assumption behind all of the above, is that learning and teaching for mastery presumes that the intended learning outcomes have been identified with mastery in view, i.e. the essential intended learning outcomes for mastery are the ones that are the content of the learning-teaching situation.

If this exercise is done, then in fact there is no difference between the analytical specification activity for defining the intended learning outcomes, and the analytical specification activity for criterion referenced testing related to mastery learning. They are both the one and the same analytical exercise.

Aside from indicating the pedagogical advantages of mastery learning and criterion testing, the specifications for the instructional system and teacher education developed by the curriculum system will need to provide detailed assistance to the learning-teaching situation through such resources as lists of common learning difficulties, practice and reinforcement episodes, criteria for developing mastery tests and examples of criterion referenced test items.

Further, the specifications for the instructional system and teacher education should include diagnostic tests so that learning difficulties of individual children may be identified and the required remedial action taken. These elements point to very specific suggestions required for teacher training programmes.

In order to utlize effectively the methodologies listed above, Group 2 identified the following competencies necessary for the teachers to deal with the learning and other problems of the disadvantaged child population and to implement the recommended methodologies. These competencies would them provide the signals for the guidelines that may be transmitted by the curriculum specialists for teacher education purposes, aside from the teachers' guides and other materials directly interpreting the acquiring of the intended learning outcomes in the classroom.

The competencies of the teacher in the classroom may be grouped under the three broad categories: (i) knowledge, (ii) skills and abilities, (iii) attitudes and interests.

Knowledge of

a) Social and physical environment and locally available resources

Several of the methodologies indicated above require the teacher to have a first hand knowledge of the resources available in the locality, so that these may be mobilized as and when required. The specifications provided to the instructional system through textbooks and teachers' guides and suggestions for teacher education cannot possibly be in such detail as to cover all the specifics required in the context of daily learning and teaching in the environment in which the school is placed. In addition, this local-specific knowledge is essential so that the teacher may be able to relate the classroom learning to the life around the child, to make the child's learning meaningful.

The extent of knowledge required would cover the material resources in the locality, the artistic and cultural heritage including customs, taboos, life practices, production resources, and human resources in the various content elements of the intended learning outcomes. Another aspect of this knowledge is the particular home condition of the learners, the tasks the learners have to undertake in the home and the nature of the home and community learning environment of the child. If, of course, the teacher is locally recruited, then these will be part of the knowledge repertoire of the teacher, but the manner of mobilizing these would be the particular competence that will be required. If the teacher is recruited from outside the locality, and specially belongs to a social group that is not economically and socially disadvantaged like the learners, then the entire spectrum of knowledge regarding the general and specific characteristics of the disadvantaged environment and its children becomes essential for effective functioning by the teacher.

b) Language competencies of the children

While this knowledge competence is implied in the above, its special importance merits particular emphasis. The teacher must know the individual entry level language competencies of the disadvantaged children, whether the

school language of instruction is in the mother tongue or not. The teacher has to place the teaching at the level of language of the child. Knowledge of entry language characteristics also permits the teacher to develop language sequences taking into account both the deficits and the strengths in the child's language. The detail of knowledge in this respect extends beyond oral vocabulary and implicit and explicit meanings of words, to sentence forms, grammatical structures and other linguistic elements required to form the basis for early language learning.

c) Curriculum goals, objectives and strategies

The programmes of universalization of the first level of education, and the emphasis on learning by disadvantaged children have, in most countries, incorporated detailed curriculum goals, objectives to be achieved, and strategies to be implemented to achieve the goals and objectives. The teacher servicing disadvantaged areas must have practical knowledge of these elements of the educational programmes since these are pivotal to the interpretation of the specific learning objectives and sequences provided in the specifications to the instructional system by curriculum specialists. With a detailed understanding and conception of these elements the teacher will be in a position to interpret and relate the day to day learning and teaching to the needs, capabilities, strengths and deficits of the learners from disadvantaged environments, and to the constraints in these environments. In particular, flexibility of interpretations of the curricula to suit the local specific conditions have to be guided by intimate knowledge of curricular goals and objectives so that the educational activities will be consistent with national policy directives and efforts.

d) Teaching techniques for disadvantaged groups

The methodologies indicated above are some of the techniques that would be required when providing for enhanced achievement performance by learners from disadvantaged environments. In particular, the teacher needs practical knowledge of techniques for diagnosing learning difficulties and remedying them, motivating

learners, managing a variety of learning-teaching modes, initiating learning using action situations the disadvantaged child is competent in, providing for practice and reinforcement situations, and evaluating mastery achievement.

Skills and abilities

Associated with the knowledge component, and in terms of the methodologies recommended for support to learning by children from disadvantaged environments, the following list of skills require priority attention:

a) Communicate in the child's own language;

b) Communicate with the community and mobilize community support;

c) Utilize human and material resources in the environment;

d) Draw and illustrate on the blackboard;

e) Develop low-cost support materials and other learning-teaching aids;

f) Identify community problems and use them in the teaching-learning process;

g) Plan and manage classroom learning activities;

h) Plan and manage home and community learning activities;

i) Plan and manage teaching multiple classes;

j) Assess and evaluate learners for formative, diagnostic and summative pruposes.

Attitudes and interests

The situations which the teachers serving children from disadvantaged environments face, require the teacher to possess a number of positive attitudes, and a range of interests. These stem from the fact that the teachers' active co-operation is essential for any curriculum to be implemented, from the prior planning for implementation, to the summative evaluation of the learners. The teacher has to recognize and respect local values and culture to find effective convergences between school learning and the local cultural context. Effective teaching requires the teacher to have the desire to motivate the community to contribute its resources and bear a co-operative responsibility for educating the young.

None of the above can take place unless there is considerable motivation and dedication in the teacher to teach in disadvantaged environments, perhaps even as a national duty. Creativity, perserverence, self-criticism, tolerance of failure, all can arise only if this dedication to the profession is present.

Equally important, the teacher has to recognize her own education as a life-long process, and must have the desire and willingness to achieve professional growth through constant efforts of self-analysis, learning from experience, and re-education.

Developing identified competencies in teachers

The guidelines for teacher education developed by curriculum specialists may indicate the manner in which the specifications identified above can find their place in the several modes for training teachers such as the following:

a) Pre-service teacher training, as well as

b) In-service teacher training.

Further, the kind and nature of the guidelines for teacher education developed by the curriculum developers need to fit the requirements of the individual training modes indicates below. Curriculum developers have to be trained to be able to provide such specific guidelines for teacher education.

Pre-service teacher training

The pre-service teacher training programmes have to deal with special inputs that should be provided for disadvantaged children to overcome identified learning-teaching problems. However, the Group 2 spent its time in discussing the general strategy for in-service training, because urgent action is needed to meet the immediate requirements of the disadvantaged learners.

In-service teacher training

In considering the in-service teacher training programmes, Groups identified the following:

a) Production-cum training workshops and seminars

Workshops and seminars should be organized for the in-service teachers so that the teachers can acquire the specific competencies required to teach the disadvantaged, in the course of which they will produce the relevant materials, such as entry behaviour tests, learning sequences, diagnostic tests, remedial sequences, criterion referenced tests and the required audio-visual aids for effective teaching.

b) Orientation to curriculum and textbooks

The teacher needs orientation to the curriculum objectives and to the rationale used in designing these objectives. A similar orientation is required for those objectives or competencies selected specifically for mastery. The relationships between the objectives and textbooks and other instructional materials have to be identified as a component of the orientation, and local specific examples corresponding to those given in the textbooks have to be considered.

c) Organization of teachers' centres within school clusters

A small number of schools within a cluster may have a Teachers' Centre where informal exchange of experience as well as in-service training may be organized. These centres may be located in suitably placed schools. A major function of such centres would be to share effective techniques and methodologies for enhancing the learning by children from disadvantaged environments.

d) Observation visits

Teachers should be invited to visit the neighbouring schools which have developed themselves as models in respect of their activities related to improving learning by children from disadvantaged populations.

e) Mobile team training

A team of trainers may be organized for providing mobile training to in-service teachers. The team should have sufficient mobility and flexibility to provide training to those teachers who need it most. Further, the training should be predominantly based upon solving the specific problems of those teachers the team visits rather than being generalized.

f) Distance learning-cum-contact programme

The teachers must have the opportunity to learn aspects of teaching children from disadvantaged environments through radio and television and correspondence courses. However, to derive full benefit, contact programmes have to be organized around the main themes of the distance learning programmes. In addition, local specificity may

be built into the programme by incorporating assignments for the teachers which focus upon the teaching-learning problems in their own classrooms.

g) Demonstrations by experienced teachers and discussions

The teachers can learn a great deal through demonstrations by experienced teachers and discussions with them. It is possible to clarify many of the concepts and issues through open and frank discussion with other colleagues. Perhaps more important would be the exchange of tested solutions to practical teaching-learning problems, which would increase the options available for such purposes for young teachers.

h) Micro-teaching workshop

Micro-teaching workshops are useful in developing specific skills of teaching. The teacher must know many of the micro-level skills required to make teaching effective. Workshops should be organized to develop skills to interact with disadvantaged children, in respect of specific learning areas that are found to be particularly difficult for these children. Special attention may be provided to early language learning and to remedial teaching for slow learners.

i) School-based in-service programme

The school should be regarded as a centre for professional growth of the teacher. The headmaster or local supervisor of the school may initiate programmes for discussion on different practical problems and issues in the school itself. This may become a regular feature of the school programme. For this purpose, the school may be able to develop simple but relevant documentation on these problems, so that, overtime, an institutional memory will be developed at the school.

The main objective of the discussions in Group 2 was the development of a training framework for curriculum specialists to be able to provide effective specifications for the instructional system through such means as textbooks, other learning materials, teachers' guides, and guidelines for the pre-service and in-service training of teachers.

The basic modalities for training curriculum specialists have been indicated in the Report of Group 1, and it takes into account the need for this training in the context of the on-going activities at a national curriculum development centre. Hence, a cyclic

production-cum-training mode is recommended, with field investigations made integral components of the training. In the above analysis and identification, the significant 'raw materials' that must be included in the training of curriculum specialists in regard to their tasks of developing specifications for the instructional system have been identified. These have to be woven into the training modalities indicated in the Report of Group 1. The 'raw materials' involve the following:

a) Recommended methodologies for the learning and teaching situation involving learners from disadvantaged environments.

b) The important knowledge, skills, abilities, attitudes and interests components that have to be present in teachers to be able to deal with the problems and issues of working with learners from disadvantaged environments.

c) The kinds of training vehicles that may be used for the training of teachers for which guidelines have to be provided by the curriculum specialists.